

PROJECT TITLE : CIGARETTE AND SMOKE ANALYSIS  
PERIOD COVERED : JANUARY 25 - FEBRUARY 24 1982  
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EXPANDED TOBACCO USED FOR THE FIRST TIME IN BELGIAN BRANDS

The analyses showed that the ET material was produced using the Reynolds' process (1).

| <u>Manufacturer</u> | <u>Brands</u>           | <u>% Expanded Tobacco</u> |
|---------------------|-------------------------|---------------------------|
| Tabacofina          | Belga Rouge 70/F        | 6                         |
| Landewyck           | Kent 80/F               | 8                         |
| Landewyck           | Kent Golden Lights 84/F | 15                        |

TRANSFORMATION OF US TAR AND SN VALUES INTO GERMAN VALUES

Based on the regression curves recently established for transforming US tar and SN values into ISO values and QA PME tar and SN values into German values (2), two regression curves were calculated for transforming US values into German values (3).

These regression curves are of the type

$$y = ax + b$$

x being the tar or SN obtained by PM Richmond (FTC-US)

y being the tar or SN obtained by PMG (DIN)

For tar and for the same butt length       $y = 1.03 x - 0.9$   
For SN and for the same butt length       $y = 1.18 x - 0.21$

For a difference of + 1 mm in butt length found by PMG, the y results (tar and SN) must then be multiplied by 0.98.

These calculations can be made only for cigarettes in the range of

US tar 10 to 18 mg  
US SN 0.7 to 1.2 mg

QUALITY LEVEL OF PM AND COMPETITORS' BRANDS

Two sampling plans were established for the German and Belgian markets in order to compare the quality level of Philip Morris brands with those of our competitors during a six-month period (4).

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DATA FROM THE OFFICIAL FRENCH LABORATORY (LNE) (SEE APPENDIX 1)

A list has been established showing the tar and nicotine values of all PM brands analysed by LNE, compared with the results obtained by QA PME (5).

- All the brands have been declared to correspond to the regulations of article 3 of the decree dated January 30, 1978.
- On average, the tar and SN results obtained by LNE are slightly lower than those obtained by QA PME. For the tar, the 1981 deviation is higher than the 1979 and 1980 deviations.

|          | <u>Deviation in %</u> |             |             |
|----------|-----------------------|-------------|-------------|
|          | <u>1981</u>           | <u>1980</u> | <u>1979</u> |
| Tar      | - 6.0                 | - 3.2       | - 3.3       |
| Nicotine | - 1.9                 | - 3.6       | - 3.4       |

COMPARATIVE RESULTS - FINLAND (SEE APPENDIX 2)

A list has been established showing the DPM, SN and CO values found by the three laboratories

Amer Tupakka OY (ATO)  
Finnish State Laboratory (VTT)  
QA PME

on PM brands sold in Finland (6).

Based on the results obtained by ATO and VTT in 1981 and QA PME results taken from the CIR for the same period, the following comments can be made:

1. Due to the use of the Borgwaldt smoking machine with electrostatic trap, ATO found on average lower smoke yields than VTT and QA PME

Deviation in % (VTT-ATO)

|     | <u>1981</u> | <u>1979</u> | <u>1978</u> |
|-----|-------------|-------------|-------------|
| DPM | - 13.3      | - 14.4      | - 10.2      |
| SN  | - 3.8       | - 4.4       | + 2.2       |
| CO  | - 2.7       | + 3.8       | + 5.6       |

Deviation in % (QA PME-ATO)

|     | <u>1981</u> | <u>1979</u> | <u>1979</u> | <u>1978</u> |
|-----|-------------|-------------|-------------|-------------|
| DPM | - 22.4      | - 19.6      | - 16.4      | - 11.9      |
| SN  | - 12.6      | - 13.9      | - 5.8       | - 7.1       |
| CO  | - 15.4      | - 11.0      | - 9.5       | + 8.6       |

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2. Compared with QA PME, VTT who uses identical equipment, found on average lower results in smoke yield.

|     | <u>Deviation in %</u> |               |             |             |
|-----|-----------------------|---------------|-------------|-------------|
|     | <u>1981</u>           | <u>1980/1</u> | <u>1979</u> | <u>1978</u> |
| DPM | - 10.5                | - 8.5         | - 6.1       | - 1.9       |
| SN  | - 9.2                 | - 10.8        | - 9.9       | - 9.1       |
| CO  | - 13.1                | - 15.4        | - 14.2      | + 2.9       |

We observed a gradual increase in the DPM deviations, whereas the smoke nicotine deviations were practically constant.

A collective test will be organized to confirm these deviations.

#### SPOTTING COMPLAINTS IN TUNISIA ON MARLBORO PRODUCED IN RICHMOND USA

Following consumer complaints 23 mio of cigarettes from 3 different orders, but from the same shipment, were blocked in a Tunis warehouse. At PM-USA request we carried out an onsite inspection. 72 cases from the three orders were examined.

The percentage of cases having more than 70 % of the cigarettes with critical spotting were estimated as follows:

Order 9081 : about 7 %  
Order 9122 : about 23 %  
Order 9123 : about 25 %

A complete report will be issued soon.

#### PRODUCT REPORTS

Product reports were written on the following new or modified brands:

| <u>Brand</u>   | <u>Manufacturer</u> | <u>Country of sale</u> |
|--|---------------------|------------------------|
| Parisienne Extra 79/F<br>(line extension)                    | Burrus              | Switzerland            |
| Peter Stuyvesant Ultra 84/F<br>(line extension)              | Laurens-Rothmans    | Switzerland            |
| Craven A Luxury Length 94/F<br>(line extension)              | Carreras-Rothmans   | United Kingdom         |
| Craven A Luxury Length Special<br>Mild 94/F (line extension) | Carreras-Rothmans   | United Kingdom         |
| Silk Cut Extra Mild 84/F<br>(national relaunch)              | Gallaher            | United Kingdom         |

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REFERENCES

- 1 Letter from Senehi-F (February 17 1982)
- 2 Monthly report October 23 - November 23 1981
- 3 Telecopy from Senehi-F to Völkl-G (February 23 1982)
- 4 Letter from Senehi-F to Lutzig-B.W. and Fauville-H. (January 18 1982 / February 22 1982)
- 5 Letter from Senehi-F (February 23 1982)
- 6 Letter from Senehi-F (February 16 1982)

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Enclosures: Appendix 1 and 2

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COMPARATIVE RESULTS BETWEEN THE  
OFFICIAL FRENCH LABORATORY (LNE) AND QA PME

APPENDIX 1

| Brand                    | Values printed on pack |            | Limit Values |            | LNE      |            | QA PME   |            | CIR (10-11/1981) |            |
|--------------------------|------------------------|------------|--------------|------------|----------|------------|----------|------------|------------------|------------|
|                          | Goudrons               | / Nicotine | Goudrons     | / Nicotine | Goudrons | / Nicotine | Goudrons | / Nicotine | Goudrons         | / Nicotine |
| ARMADA MENTHOL           | 17.9                   | 1.09       | 20.6         | 1.25       | 15.8     | 1.14       | 17.9     | 1.17       | 16.7             | 1.15       |
| ARMADA GALION 100'S      | 17.9                   | 1.09       | 20.6         | 1.25       | 16.8     | 1.07       | 17.5     | 1.10       | 16.7             | 1.15       |
| HESTERFIELD F. SOFT      | 15.0                   | 1.20       | 17.3         | 1.38       | 13.9     | 1.14       | 14.6     | 1.13       | 15.0             | 1.21       |
| HESTERFIELD K.S. NF      | 21.0                   | 1.60       | 24.2         | 1.84       | 20.8     | 1.69       | 22.5     | 1.69       | 21.8             | 1.74       |
| HESTERFIELD REGULAR      | 21.0                   | 1.49       | 24.2         | 1.71       | 19.0     | 1.47       | 20.1     | 1.48       | 19.0             | 1.46       |
| G M FILTER KING          | 15.0                   | 1.20       | 17.3         | 1.38       | 14.2     | 1.23       | 15.0     | 1.19       | 14.6             | 1.19       |
| ARK F. KING SIZE         | 17.8                   | 1.34       | 20.5         | 1.54       | 15.2     | 1.23       | 15.5     | 1.23       | 15.9             | 1.33       |
| ARLBORO BOX              | 15.8                   | 1.09       | 18.2         | 1.25       | 15.6     | 1.16       | 16.9     | 1.22       | 16.8             | 1.18       |
| ARLBORO K.S. SOFT        | 15.8                   | 1.09       | 18.2         | 1.25       | 16.1     | 1.24       | 16.9     | 1.21       | 16.3             | 1.15       |
| ARLBORO MENTHOL          | 15.8                   | 1.09       | 18.2         | 1.25       | 15.2     | 1.15       | 16.7     | 1.18       | 16.8             | 1.12       |
| ARLBORO 100'S            | 16.9                   | 1.20       | 19.4         | 1.38       | 15.6     | 1.24       | 16.7     | 1.33       | 16.8             | 1.27       |
| ERIT                     | 7.5                    | 0.56       | 8.6          | 0.64       | 7.3      | 0.57       | 8.0      | 0.55       | 8.0              | 0.54       |
| MURATTI AMBASSADOR BOX   | 12.2                   | 0.92       | 14.0         | 1.06       | 12.0     | 0.77       | 12.3     | 0.80       | 12.0             | 0.80       |
| MURATTI AMB. EXTRA MILD  | 6.7                    | 0.45       | 7.7          | 0.52       | 6.9      | 0.42       | 7.1      | 0.41       | 7.0              | 0.43       |
| PHILIP MORRIS FILTER     | 15.8                   | 1.09       | 18.2         | 1.25       | 15.6     | 1.13       | 16.7     | 1.20       | 15.9             | 1.16       |
| PHILIP MORRIS INT,       | 15.9                   | 1.09       | 18.3         | 1.25       | 15.1     | 0.95       | 15.4     | 0.98       | 16.0             | 1.02       |
| PHILIP MORRIS SUP. LIGHT | 3.9                    | 0.40       | 4.5          | 0.46       | 3.5      | 0.32       | 4.1      | 0.36       | 4.0              | 0.35       |
| MULTIFILTER 100'S        | 13.9                   | 0.98       | 16.0         | 1.13       | 12.2     | 0.80       | 12.9     | 0.86       | 12.0             | 0.87       |
| GENERAL AVERAGE          | 14.27                  | 1.05       |              |            | 13.93    | 1.04       | 14.82    | 1.06       | 14.52            | 1.06       |

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COMPARATIVE RESULTS ATO - VTT - QAPME 1981  
ON PM FINNISH BRANDS

APPENDIX 2

| Brands                             | DPM (mg/cig) |       |       | Smoke nicotine (mg/cig) |       |       | Carbon monoxide (mg/cig) |       |       |
|------------------------------------|--------------|-------|-------|-------------------------|-------|-------|--------------------------|-------|-------|
|                                    | ATO          | VTT   | QAPME | ATO                     | VTT   | QAPME | ATO                      | VTT   | QAPME |
| <u>1981/1st test</u>               |              |       |       |                         |       |       |                          |       |       |
| MLF 03                             | 14.1         | 15.9  | 17.0  | 0.96                    | 1.00  | 1.06  | 14.5                     | 13.9  | 16.0  |
| MFM 01                             | 14.5         | 17.1  | 17.2  | 0.98                    | 1.02  | 1.05  | 13.9                     | 15.0  | 16.0  |
| MLL 03                             | 9.3          | 10.2  | 12.7  | 0.63                    | 0.71  | 0.79  | 8.3                      | 9.0   | 11.1  |
| PMM 01                             | 13.2*        | 13.7* | 17.1* | 0.92                    | 0.89  | 1.04  | 14.9*                    | 14.7* | 19.4* |
| BEM 01                             | 9.2          | 11.9  | 11.9  | 0.68                    | 0.71  | 0.80  | 9.8                      | 10.4  | 11.3  |
| BEN 01                             | 7.4          | 8.8   | 10.8  | 0.52                    | 0.57  | 0.74  | 8.1                      | 9.2   | 12.7  |
| BEO 01                             | 7.4          | 8.6   | 10.5  | 0.53                    | 0.56  | 0.70  | 7.9                      | 8.6   | 9.6   |
| Average $\bar{x}$                  | 10.3         | 12.1  | 13.4  | 0.75                    | 0.78  | 0.88  | 10.4                     | 11.0  | 12.8  |
| <u>2 1981/2nd test</u>             |              |       |       |                         |       |       |                          |       |       |
| MLF 03                             | 14.8         | 16.6  | 17.4  | 1.01                    | 1.03  | 1.06  | 14.5                     | 14.7  | 15.8  |
| MFM 01                             | 13.9         | 16.0  | 17.4  | 1.00                    | 1.04  | 1.03  | 14.5                     | 14.4  | 16.0  |
| MLL 03                             | 9.7          | 10.9  | 12.8  | 0.70                    | 0.70  | 0.78  | 9.1                      | 9.3   | 10.8  |
| PMM 01                             | 13.1*        | 14.6* | ----  | 0.87*                   | 0.89* | ----  | 15.1*                    | 14.7* | ----  |
| BEM 01                             | 9.4          | 10.3  | 12.4  | 0.74                    | 0.74  | 0.87  | 8.6*                     | 8.8*  | ----  |
| BEN 01                             | 7.4          | 9.4   | 10.8  | 0.56                    | 0.62  | 0.74  | 8.2*                     | 9.1*  | ----  |
| BEO 01                             | 7.1          | 8.6   | 10.4  | 0.56                    | 0.62  | 0.69  | 9.4                      | 8.9   | 10.4  |
| Average $\bar{x}$                  | 10.4         | 12.0  | 13.5  | 0.76                    | 0.79  | 0.86  | 11.9                     | 11.8  | 13.3  |
| General average for 1981 $\bar{x}$ | 10.4         | 12.0  | 13.4  | 0.76                    | 0.79  | 0.87  | 11.0                     | 11.3  | 13.0  |

\* This result is not taken into consideration for the average

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